Harris A.
09/618590

-Key terms

FILE 'CAPLUS' ENTERED AT 10:51:08 ON 05 FEB 2002
L1 20695 SEA ABB=ON PLU=ON COLON##(5A)(CANCER? OR CARCIN? OR TUMOUR OR TUMOR OR NEOPLAS?)
L2 15 SEA ABB=ON PLU=ON L1 AND (CSG OR COLON SPECIF? GENE)

L2 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2002:10740 CAPLUS
DOCUMENT NUMBER: 136:84128
TITLE: Use of **colon specific** **genes** and gene products in diagnosing, monitoring, staging, imaging and treating **colon cancer**
INVENTOR(S): Macina, Roberto A.; Pillai, Rajeswari
PATENT ASSIGNEE(S): Diadexus, Inc., USA
SOURCE: PCT Int. Appl., 135 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002000939	A2	20020103	WO 2001-US20724	20010628

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2000-214515 P 20000628

AB The invention relates to **colon specific** **gene** (**CSG**) polypeptides, polynucleotides encoding the polypeptides, methods for producing the polypeptides, in particular by expressing the polynucleotides, and agonists and antagonists of the polypeptides. The present invention includes methods of diagnosing metastases or staging of **colon** **cancer** in a patient by comparing **CSG** expression levels in cells, tissues and body fluids of **colon** **cancer** patients and normal human control. Increased expression of **CSG** indicates progressive cancer while decreased **CSG** expression is correlated with cancer that is regressing or in remission. The invention further relates to methods for utilizing such polynucleotides, polypeptides, agonists and antagonists for applications, which relate, in part, to research, diagnostic and clin. arts. Antibodies to **CSG** polypeptides can be labeled for detection in tissues which would be useful in detecting **colon cancer** via imaging and therapy. Vaccines contg. **CSG** proteins are another embodiment of the invention.

L2 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:886514 CAPLUS

DOCUMENT NUMBER: 136:34276
TITLE: Method of diagnosing, monitoring, staging, imaging and treating **colon cancer**
INVENTOR(S): Macina, Roberto A.; Chen, Sei-yu; Pluta, Jason; Sun, Yongming; Recipon, Herve
PATENT ASSIGNEE(S): Diadexus, Inc., USA
SOURCE: PCT Int. Appl., 116 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001092528	A2	20011206	WO 2001-US17583	20010529

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2000-207383 P 20000526

AB The invention relates to **CSG** (**colon-specific genes**) polypeptides, polynucleotides encoding the polypeptides, methods for producing the polypeptides, in particular by expressing the polynucleotides, and agonists and antagonists of the polypeptides. The invention further relates to methods for utilizing such polynucleotides, polypeptides, agonists and antagonists for applications, which relate, in part, to research, diagnostic and clin. arts.

L2 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:730999 CAPLUS
DOCUMENT NUMBER: 135:284064
TITLE: **Colon cancer**-associated cDNA sequences and methods for diagnosing, monitoring, staging, imaging and treating **colon cancers**
INVENTOR(S): Yang, Fei; Piderit, Alejandra; Hu, Ping; Recipon, Herve; Macina, Roberto A.
PATENT ASSIGNEE(S): Diadexus, Inc., USA
SOURCE: PCT Int. Appl., 105 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001073030	A2	20011004	WO 2001-US9737	20010326

W: AU, CA, JP, US
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR
PRIORITY APPLN. INFO.: US 2000-192667 P 20000328
AB The present invention provides fifty seven cDNA fragment sequence which are diagnostic markers for **colon cancer**. In addn., antibodies immunospecific for these markers are provided. Vectors, hosts cells and methods for producing these markers, as well as methods and tools for using these markers in detecting, diagnosing, monitoring, staging, prognosticating, imaging and treating **colon cancer** are also provided.

L2 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:475327 CAPLUS
DOCUMENT NUMBER: 135:207449
TITLE: Nucleic acid-based ribozyme and DNAzyme modulators of gene expression
INVENTOR(S): McSwiggen, James; Usman, Nassim; Blatt, Lawrence; Beigelman, Leonid; Burgin, Alex; Karpeisky, Alexander; Matulic-Adamic, Jasenka; Sweedler, David; Draper, Kenneth; Chowrira, Bharat; Stinchcomb, Dan; Beaudry, Amber; Zinnen, Shawn; Lugwig, Janos; Sproat, Brian S.
PATENT ASSIGNEE(S): Ribozyme Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 717 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001016312 A2		20010308	WO 2000-US23998	20000830

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ
RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG
PRIORITY APPLN. INFO.:
US 1999-PV151713 19990831
US 1999-406643 19990927
US 1999-PV156467 19990927
US 1999-PV156236 19990927
US 1999-436430 19991108
US 1999-PV169100 19991206
US 1999-PV173612 19991229
US 1999-474432 19991229
US 1999-476387 19991230
US 2000-498824 20000204
US 2000-531025 20000320
US 2000-PV197769 20000414
US 2000-578223 20000523

AB Novel nucleic acid mols. useful as inhibitors of gene expression, compns., and methods for their use are provided. The invention features novel nucleic acid-based techniques (e.g., enzymic nucleic acid mols. (ribozymes), antisense nucleic acids, 2-5A antisense chimeras, triplex DNA, and antisense nucleic acids contg. RNA-cleaving chem. groups) and their use to modulate the expression

of mol. targets impacting the development and progression of cancers, diabetes, obesity, Alzheimer's disease diseases, age-related diseases, and/or hepatitis B infections and related conditions. Catalytic nucleic acids were designed for site-specific cleavage of human mRNA targets encoding protein tyrosine phosphatase 1b, methionine aminopeptidase, .beta.-secretase, presenilin-1, epidermal growth factor receptor-2 (HER2/c-erb2/neu), phospholamban, telomerase, and hepatitis B virus genes. Methods for chem. synthesis of modified nucleoside triphosphates (NTPs) and RNA polymerase-catalyzed incorporation of modified NTPs into catalytic oligonucleotides are also provided. [This abstr. record os one of 6 records for this document necessitated by the large no. of index entries required to fully index the document and publication system constraints.].

L2 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:400023 CAPLUS
Correction of: 2001:294219
DOCUMENT NUMBER: 135:16022
Correction of: 134:337614
TITLE: Nucleic acid-based ribozyme and DNAzyme modulators of gene expression
INVENTOR(S): McSwiggen, James; Usman, Nassim; Blatt, Lawrence; Beigelman, Leonid; Burgin, Alex; Karpeisky, Alexander; Matulic-adamic, Jasenka; Sweedler, David; Draper, Kenneth; Chowrira, Bharat; Stinchcomb, Dan; Beaudry, Amber; Zinnen, Shawn; Lugwig, Janos; Sproat, Brian S.
PATENT ASSIGNEE(S): Ribozyme Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 717 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001016312 A2		20010308	WO 2000-US23998	20000830
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ				
RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG				

PRIORITY APPLN. INFO.:
US 1999-PV151713 19990831
US 1999-406643 19990927
US 1999-PV156467 19990927
US 1999-PV156236 19990927
US 1999-436430 19991108
US 1999-PV169100 19991206
US 1999-PV173612 19991229
US 1999-474432 19991229
US 1999-476387 19991230
US 2000-498824 20000204
US 2000-531025 20000320
US 2000-PV197769 20000414
US 2000-578223 20000523

AB Novel nucleic acid mols. useful as inhibitors of gene expression,

compns., and methods for their use are provided. The invention features novel nucleic acid-based techniques (e.g., enzymic nucleic acid mols. (ribozymes), antisense nucleic acids, 2-5A antisense chimeras, triplex DNA, and antisense nucleic acids contg. RNA-cleaving chem. groups) and their use to modulate the expression of mol. targets impacting the development and progression of cancers, diabetes, obesity, Alzheimer's disease diseases, age-related diseases, and/or hepatitis B infections and related conditions. Catalytic nucleic acids were designed for site-specific cleavage of human mRNA targets encoding protein tyrosine phosphatase 1b, methionine aminopeptidase, .beta.-secretase, presenilin-1, epidermal growth factor receptor-2 (HER2/c-erb2/neu), phospholamban, telomerase, and hepatitis B virus genes. Methods for chem. synthesis of modified nucleoside triphosphates (NTPs) and RNA polymerase-catalyzed incorporation of modified NTPs into catalytic oligonucleotides are also provided. [This abstr. record os one of 6 records for this document necessitated by the large no. of index entries required to fully index the document and publication system constraints.].

L2 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:294219 CAPLUS
Correction of: 2001:168136
DOCUMENT NUMBER: 134:337614
Correction of: 134:233606
TITLE: Nucleic acid-based ribozyme and DNAzyme modulators of gene expression
INVENTOR(S): McSwiggen, James; Usman, Nassim; Blatt, Lawrence; Beigelman, Leonid; Burgin, Alex; Karpeisky, Alexander; Matulic-adamic, Jasenka; Sweedler, David; Draper, Kenneth; Chowrira, Bharat; Stinchcomb, Dan; Beaudry, Amber; Zinnen, Shawn; Lugwig, Janos; Sproat, Brian S.
PATENT ASSIGNEE(S): Ribozyme Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 717 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001016312 A2		20010308	WO 2000-US23998	20000830

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ
RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG

PRIORITY APPLN. INFO.:
US 1999-PV151713 19990831
US 1999-406643 19990927
US 1999-PV156467 19990927
US 1999-PV156236 19990927
US 1999-436430 19991108
US 1999-PV169100 19991206
US 1999-PV173612 19991229
US 1999-474432 19991229
US 1999-476387 19991230

US 2000-498824 20000204
US 2000-531025 20000320
US 2000-PV197769 20000414
US 2000-578223 20000523

AB Novel nucleic acid mols. useful as inhibitors of gene expression, compns., and methods for their use are provided. The invention features novel nucleic acid-based techniques (e.g., enzymic nucleic acid mols. (ribozymes), antisense nucleic acids, 2-5A antisense chimeras, triplex DNA, and antisense nucleic acids contg. RNA-cleaving chem. groups) and their use to modulate the expression of mol. targets impacting the development and progression of cancers, diabetes, obesity, Alzheimer's disease diseases, age-related diseases, and/or hepatitis B infections and related conditions. Catalytic nucleic acids were designed for site-specific cleavage of human mRNA targets encoding protein tyrosine phosphatase 1b, methionine aminopeptidase, .beta.-secretase, presenilin-1, epidermal growth factor receptor-2 (HER2/c-erb2/neu), phospholamban, telomerase, and hepatitis B virus genes. Methods for chem. synthesis of modified nucleoside triphosphates (NTPs) and RNA polymerase-catalyzed incorporation of modified NTPs into catalytic oligonucleotides are also provided. [This abstr. record os one of 6 records for this document necessitated by the large no. of index entries required to fully index the document and publication system constraints.].

L2 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:247142 CAPLUS
DOCUMENT NUMBER: 134:306971
TITLE: Colon and colon cancer associated cDNAs and proteins and their use in diagnosis and treatment of colon cancer
INVENTOR(S): Ruben, Steven M.; Barash, Steven C.; Birse, Charles E.; Rosen, Craig A.
PATENT ASSIGNEE(S): Human Genome Sciences, Inc., USA
SOURCE: PCT Int. Appl., 9787 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001022920	A2	20010405	WO 2000-US26524	20000928
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 2000077215	A5	20010430	AU 2000-77215	20000928

PRIORITY APPLN. INFO.:
US 1999-157137 P 19990929
US 1999-163280 P 19991103
WO 2000-US26524 W 20000928

AB This invention relates to newly identified colon or colon cancer related polynucleotides and the polypeptides encoded by these polynucleotides herein collectively known as <scolon cancer antigens<s, and the use of such colon cancer antigens for targeting specific cell types and/or diagnosing, detecting, preventing and treating disorders of the colon, particularly the presence of colon cancer and colon cancer metastases. This invention relates to colon cancer antigens as well as vectors, host cells, antibodies directed to colon cancer antigens and the recombinant or synthetic methods for producing the same. Also provided are diagnostic methods for diagnosing and treating, preventing and/or prognosing disorders related to the colon, including colon cancer, and therapeutic methods for treating such disorders. The invention further relates to screening methods for identifying agonists and antagonists of colon cancer antigens of the invention. The present invention further relates to inhibiting the prodn. and function of the polypeptides of the present invention.

L2 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:116933 CAPLUS
DOCUMENT NUMBER: 132:177721
TITLE: A novel method of diagnosing, monitoring, staging, imaging and treating **colon cancer** by determining **colon-specific genes** in body fluids and tissues
INVENTOR(S): Sun, Yongming; Recipon, Herve; Macina, Roberto A.
PATENT ASSIGNEE(S): Diadexus Llc, USA
SOURCE: PCT Int. Appl., 42 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000007632	A1	20000217	WO 1999-US16357	19990720
W: CA, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1107798	A1	20010620	EP 1999-937328	19990720
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

PRIORITY APPLN. INFO.: US 1998-95231 P 19980804
WO 1999-US16357 W 19990720

AB The present invention provides new methods for detecting, diagnosing, monitoring, staging, prognosticating, imaging and treating **colon cancer** that involves detg. levels of **colon-specific gene** activity in body fluids and tissues.
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:753379 CAPLUS

DOCUMENT NUMBER: 132:1796
TITLE: A novel method of diagnosing, monitoring, and staging **colon cancer** based on **colon-specific gene** expression
INVENTOR(S): Macina, Roberto A.; Yang, Fei; Sun, Yongming
PATENT ASSIGNEE(S): Diadexus Llc, USA
SOURCE: PCT Int. Appl., 47 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9960161	A1	19991125	WO 1999-US10498	19990512
W: CA, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1080227	A1	20010307	EP 1999-924210	19990512
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

PRIORITY APPLN. INFO.: US 1998-86266 P 19980521
WO 1999-US10498 W 19990512

AB The present invention provides a new method for detecting, diagnosing, monitoring, staging, and prognosticating **colon cancer** vis nine **colon-specific genes** (**CSGs**). Electronic subtractions, transcript imaging and protein functions searches were used to identify clones whose component EST's were exclusively or more frequently found in libraries from specific tumors. Six clones were identified whose expression predominantly occurs in the colon, and 1 of these clones was useful as a diagnostic marker for lung cancer.

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:495387 CAPLUS
DOCUMENT NUMBER: 131:154486
TITLE: Human genes and gene expression products from a colon cancer cell line KM12L4-A cDNA library
INVENTOR(S): Williams, Lewis T.; Escobedo, Jaime; Innis, Michael A.; Garcia, Pablo Dominguez; Sudduth-Klinger, Julie; Reinhard, Christoph; Giese, Klause; Randazzo, Filippo; Kennedy, Giulia C.; Pot, David; Kassam, Altaf; Lamson, George; Drmanac, Radoje; Crkvenjakov, Radomir; Dickson, Mark; Drmanac, Snezana; Labat, Ivan; Leshkowitz, Dena; Kita, David; Garcia, Veronica; Jones, William Lee; Stache-Crain, Birjit
PATENT ASSIGNEE(S): Chiron Corporation, USA; Hyseq Inc.
SOURCE: PCT Int. Appl., 2479 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9938972	A2	19990805	WO 1999-US1619	19990128
WO 9938972	A3	19991223		
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9924716	A1	19990816	AU 1999-24716	19990128
EP 1053319	A2	20001122	EP 1999-904288	19990128
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

PRIORITY APPLN. INFO.:			
	US 1998-72910	P	19980128
	US 1998-75954	P	19980224
	US 1998-80114	P	19980331
	US 1998-80515	P	19980403
	US 1998-80666	P	19980403
	US 1998-105234	P	19981021
	US 1998-105877	P	19981027
	WO 1999-US1619	W	19990128

AB This invention relates to novel human polynucleotides and variants thereof, their encoded polypeptides and variants thereof, to genes corresponding to these polynucleotides and to proteins expressed by the genes. The invention provides the nucleotide sequences for 2502 human polynucleotides isolated as cDNA clones from the human colon cancer cell line KM12L4-A, 2600 validation sequence, plus 146 sequences assembled as contigs. Many of the cDNA sequences provided are differentially expressed in the cancerous state (colon cancer, lung cancer, breast cancer) or in specific tissues (e.g., colon). Database homol. searches identified various protein families that encompass some of the putative protein products. Diagnostic and therapeutic agents employing such novel human polynucleotides, their corresponding genes or gene products, e.g., these genes and proteins, including probes, antisense constructs, and antibodies, are also provided.

L2 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER:	1999:298090 CAPLUS
DOCUMENT NUMBER:	131:111015
TITLE:	Extract of Solanum muricatum (pepino/**CSG**) inhibits tumor growth by inducing apoptosis
AUTHOR(S):	Ren, Weiping; Tang, Dean G.
CORPORATE SOURCE:	Virotech Canada Inc., Windsor, ON, N8W 3K5, Can.
SOURCE:	Anticancer Res. (1999), 19(1A), 403-408 CODEN: ANTRD4; ISSN: 0250-7005
PUBLISHER:	International Institute of Anticancer Research
DOCUMENT TYPE:	Journal
LANGUAGE:	English

AB Apoptosis, or programmed cell death, is characterized by certain distinct morphol. and biochem. features. Most chemotherapeutic drugs exert their anti-tumor effects by inducing apoptosis.

Therefore, an effective compd. inducing apoptosis appears to be a relevant strategy to suppress various human tumors. In a search for tumor inhibitors from various kinds of plants, we found that exts. from Solanum muricatum (**CSG**) can inhibit tumor growth both in vivo and in vitro by inducing apoptosis. A lyophilized aq. fraction extd. from Solanum muricatum (**CSG**) was used in this study. The human cell lines tested include: prostate (PC3, DU145), stomach (MKN45), liver (QGY-7721, SK-HEP-1), breast (MDA-MB-435), ovarian (OVCAR), **colon** (HT29) and lung (NCI-H209) **cancer** cells; NHP (prostate), HUVEC (umbilical vein endothelial cell), and WI-38 (lung diploid fibroblasts) normal cells. The cell survival was detd. by either Cell Titer MTS cell proliferation kit or trypan blue dye exclusion assay. The apoptosis was analyzed by (a) apoptotic morphol. by light microscopy; (b) DNA ladder formation; (c) PARP cleavage assay. A) **CSG** possesses selective cytotoxic activity against all the tumor cell lines being tested. The LD50 value is 561-825 .mu.g/mL. B) **CSG** showed a much lower cytotoxicity to NHP, HUVEC and WI-38 normal cell lines with LD50 value being 2.8-3.2 mg/mL, which is 3-6 fold higher than on tumor cells. C) The in vivo study demonstrated that injection of **CSG** (100 .mu.g) directly into tumor mass can reduce the tumor vol. dramatically in nude mice inoculated with MKN45 gastric cancer cells. D) **CSG**-mediated tumor growth inhibition is through induction of apoptotic cell death, as manifested by (a) typical apoptotic morphol.; (b) DNA ladder formation; and (c) PARP cleavage assay. Taken together, the present study suggests, for the first time, that **CSG** may represent promising new chem. entity which preferentially targets various tumor cells by triggering apoptosis.

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:202636 CAPLUS
DOCUMENT NUMBER: 128:240996
TITLE: Human colon-specific cDNA and protein sequences and use as diagnostic markers for **colon cancer** presence and metastasis
INVENTOR(S): Yu, Guo-Liang; Rosen, Craig
PATENT ASSIGNEE(S): Human Genome Sciences, Inc., USA
SOURCE: U.S., 50 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5733748	A	19980331	US 1995-469667	19950606
US 6337195	B1	20020108	US 1998-224110	19980331

PRIORITY APPLN. INFO.: US 1995-469667 A3 19950606

AB Human **colon specific gene** polypeptides and DNA (RNA) encoding such polypeptides are claimed, along with procedures for producing these polypeptides by recombinant techniques, their use as diagnostic markers for **colon cancer** presence and progression, antibodies to the

polypeptides which may be used as a vaccine, and methods for screening for agonists and antagonists which may have therapeutic use.

L2 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:105242 CAPLUS
DOCUMENT NUMBER: 126:114205
TITLE: Human **colon-specific** **genes** and proteins
INVENTOR(S): Yu, Guo-Liang; Rosen, Craig A.
PATENT ASSIGNEE(S): Human Genome Sciences, Inc., USA; Yu, Guo-Liang; Rosen, Craig A.
SOURCE: PCT Int. Appl., 79 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9639419	A1	19961212	WO 1995-US7289	19950606
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, US, UZ, VN				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2221798	AA	19961212	CA 1995-2221798	19950606
AU 9528205	A1	19961224	AU 1995-28205	19950606
EP 847398	A1	19980617	EP 1995-923764	19950606
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE				
JP 11506342	T2	19990608	JP 1995-500380	19950606

PRIORITY APPLN. INFO.: WO 1995-US7289 19950606

AB Thirteen human colon-specific cDNAs and their deduced amino acid sequences and procedures for producing such polypeptides by recombinant techniques are provided. Two of the cDNAs are full-length. Also disclosed are methods for utilizing such polypeptides or polypeptides as a diagnostic marker for **colon cancer** and as an agent to det. if **colon cancer** has metastasized. Also disclosed are antibodies specific to the **colon-specific** **gene** polypeptides which may be used to target cancer cells and be used as part of a **colon cancer** vaccine. Methods of screening for agonists and antagonists for the polypeptides and therapeutic uses of the antagonists are disclosed.

L2 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1995:200493 CAPLUS
DOCUMENT NUMBER: 122:7233
TITLE: A gene expressed in colon mucosa gene that is expressed at lower levels in colon adenomas and adenocarcinomas
INVENTOR(S): Schweinfest, Clifford W.; Papas, Takis S.
PATENT ASSIGNEE(S): United States Dept. of Health and Human Services, USA

SOURCE: PCT Int. Appl., 44 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9420616	A1	19940915	WO 1994-US1860	19940304
W: AU, CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9463508	A1	19940926	AU 1994-63508	19940304
US 5569755	A	19961029	US 1995-424567	19950417
US 5831015	A	19981103	US 1996-711928	19960911
US 6210887	B1	20010403	US 1998-184937	19981102

PRIORITY APPLN. INFO.:
US 1993-26045 A 19930305
WO 1994-US1860 W 19940304
US 1995-424567 A3 19950417
US 1996-711928 A3 19960911

AB A new gene called DRA, for down regulated in adenoma, is expressed at lower levels in colon adenomas than in normal tissues, maps to chromosome 7 and is believed to encode a tumor suppressor. The DRA gene encodes a highly hydrophobic protein with charged clusters located primarily in the carboxyl terminus. The mRNA appears to be strictly limited to the mucosa of normal colon and it is down-regulated early in colon tumorigenesis. Absence of the DRA polypeptide in tissue that usually expresses it can be used as an indicator of tissue abnormality. The DRA gene and cDNA may also have therapeutic uses. A cDNA from the gene was cloned by differential screening of banks from normal colon and colon adenocarcinoma.

L2 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1993:78665 CAPLUS
DOCUMENT NUMBER: 118:78665
TITLE: Inherited and somatic mutations of the APC gene associated with colorectal cancer of humans
INVENTOR(S): Kinzler, Kenneth W.; Vogelstein, Bert; Anand, Rakesh; Hedge, Philip John; Markham, Alexander Fred; Albertsen, Hans; Carlson, Mary L.; Groden, Joanna L.; Joslyn, Geoff; et al.
PATENT ASSIGNEE(S): Johns Hopkins University, USA; Imperial Chemical Industries PLC; University of Utah; Cancer Institute
SOURCE: PCT Int. Appl., 138 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9213103	A1	19920806	WO 1992-US376	19920116
W: AT, AU, BB, BG, BR, CA, CH, CS, DE, DK, ES, FI, GB, HU, JP, KP, KR, LK, LU, MG, MN, MW, NL, NO, PL, RO, RU, SD, SE				

RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GN, GR, IT, LU, MC, ML, MR, NL, SE, SN, TD, TG

US 5352775	A	19941004	US 1991-741940	19910808
AU 9213669	A1	19920827	AU 1992-13669	19920116
EP 569527	A1	19931118	EP 1992-906080	19920116
EP 569527	B1	20010314		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, SE

JP 07500241	T2	19950112	JP 1992-506203	19920116
AT 199746	E	20010315	AT 1992-906080	19920116

PRIORITY APPLN. INFO.:

GB 1991-963	A	19910116
US 1991-741940	A	19910808
GB 1991-962	A	19910116
GB 1991-974	A	19910116
GB 1991-975	A	19910116
WO 1992-US376	A	19920116

AB A human gene that shows inherited and somatic mutations assocd. with colorectal cancer is cloned and characterized. The gene and its product are useful as markers in the diagnosis and prognosis of the disease. A series of YAC clones of the 5q21 region were cloned by screening with markers for the region. Six genes expressed in normal colon cells and in colorectal, lung and bladder tumors were found in the region. These genes were: the FER gene at 5q11-23 similar to the v-abl gene; TB1 showing some similarity to brown adipose tissue uncoupling proteins; MCC and TB2; and APC. A cDNA from the APC gene had an open reading frame of 8,535 nucleotides that encoded a protein with some similarity to myosins and intermediate filament proteins and to to the ral2 gene product of yeast. The assocn. of these genes and mutant alleles with colorectal cancer was studied by std. methods. The gene that showed the greatest no. of germline and somatic mutations was APC and the characterization of a no. of the mutations is described.

(FILE 'MEDLINE, BIOSIS, EMBASE, WPIDS, CONFSCI, SCISEARCH, JICST-EPLUS, JAPIO, CANCERLIT' ENTERED AT 10:55:20 ON 05 FEB 2002)

L3 14 S L2

L4 10 DUP REM L3 (4 DUPLICATES REMOVED)

L4 ANSWER 1 OF 10 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD

ACCESSION NUMBER: 2001-616504 [71] WPIDS
DOC. NO. NON-CPI: N2001-459822
DOC. NO. CPI: C2001-184647
TITLE: New **colon cancer** specific polypeptides and polynucleotides, useful for detecting, diagnosing, monitoring, staging, imaging and treating **cancers**, particularly **colon cancer.**
DERWENT CLASS: B04 D16 S03
INVENTOR(S): HU, P; MACINA, R A; PIDERIT, A; RECIPON, H; YANG, F
PATENT ASSIGNEE(S): (DIAD-N) DIADEXUS INC
COUNTRY COUNT: 23
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001073030 A2		20011004	(200171)*	EN	105
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR					
W: AU CA JP US					
AU 2001051013 A		20011008	(200208)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001073030	A2	WO 2001-US9737	20010326
AU 2001051013	A	AU 2001-51013	20010326

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2001051013	A	Based on	WO 200173030

PRIORITY APPLN. INFO: US 2000-192667P 20000328
AN 2001-616504 [71] WPIDS
AB WO 200173030 A UPAB: 20011203
NOVELTY - An isolated **colon cancer** specific gene (**CSG**) polynucleotide (I) comprising:
(a) one of 57 sequences (S1) of defined base pairs (bp) as given in specification;
(b) its fragment of 15 contiguous nucleobases;
(c) a nucleic acid sequence which, due to degeneracy in genetic coding, has variations in (S1); or
(d) a nucleic acid sequence which hybridizes under stringent conditions to an antisense sequence of (S1), is new.
DETAILED DESCRIPTION - An isolated **colon cancer** specific gene (**CSG**) polynucleotide (I) comprising:
(a) one of 57 sequences (S1) of defined base pairs (bp) as given in specification such as 523, 528, 478, 495, 455, 489, 545, 220, 484, 350, 322, 306, 143, 508, 582, 582, 521, 244 and 600 bp;
(b) its fragment of 15 contiguous nucleobases;
(c) a nucleic acid sequence which, due to degeneracy in genetic coding, has variations in (S1); or
(d) a nucleic acid sequence which hybridizes under stringent conditions to an antisense sequence of (S1), is new.
INDEPENDENT CLAIMS are also included for the following:
(1) an antisense oligonucleotide (II) which hybridizes to (I);
(2) a vector (III) comprising (I);
(3) a host cell (IV) comprising (III);
(4) a **CSG** polypeptide (V) encoded by (I);
(5) producing (V);
(6) producing a cell expressing (V) by transforming or transfecting a cell with (III) so that the cell under appropriate culture conditions, expresses (V);
(7) an antibody (VI) which is immunospecific for (V);
(8) a **colon cancer** specific gene (**CSG**) for diagnosing **colon cancer**, comprising (I) or (V);
(9) a **CSG** polypeptide agonist or antagonist identified using (V); and
(10) a vaccine (VII) comprising (V) or a vector expressing (V) which induces an immune response against (V) in a mammal.
ACTIVITY - Cytostatic.
MECHANISM OF ACTION - Vaccine; gene therapy. No supporting data is given.
USE - **CSG** is useful for diagnosing, staging,

monitoring **colon cancer** for onset of metastasis or a change in stage of **colon cancer**, diagnosing metastases of **colon cancer** in a patient, by determining levels of **CSG** in a sample of cells, tissues, or body fluids and comparing it with levels of **CSG** in normal human control, where an increase in determined **CSG** level is associated with cancer. **CSG** is also useful for identifying potential therapeutic agents for use in imaging and treating **colon cancer**, by screening molecules for ability to bind to **CSG**. (V) is useful for identifying compounds which antagonize or agonize the **CSG** polypeptide, by contacting cells or cell membrane which express (V) with a candidate compound and monitoring the cells for changes in **CSG** polypeptide activities or binding as compared to cells or cell membranes not contacted with the candidate compound. (VI) labeled with paramagnetic ions or a radioisotope is useful for imaging **colon cancer** and (VI) conjugated to a cytotoxic agent is useful for treating **colon cancer**. (VII) is useful for inducing an immune response against **CSG** polypeptide and treating **colon cancer** (all claimed). (I), (V) and (VI) are useful for detecting the effect of added compounds on the production of **CSG** mRNA and polypeptides in cells. (V) is also useful to identify membrane bound or soluble receptors. (VI) is useful to isolate or identify clones expressing **CSG** polypeptide and to purify the polypeptides by affinity chromatography.
Dwg.0/0

L4 ANSWER 2 OF 10 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2001:114238 BIOSIS
DOCUMENT NUMBER: PREV200100114238
TITLE: **Colon specific gene** and protein.
AUTHOR(S): Soppet, Daniel R.; Li, Yi; Dillon, Patrick J. (1)
CORPORATE SOURCE: (1) Gaithersburg, MD USA
ASSIGNEE: Human Genome Sciences, Inc.
PATENT INFORMATION: US 6080722 June 27, 2000
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (June 27, 2000) Vol. 1235, No. 4, pp. No Pagination. e-file.
ISSN: 0098-1133.
DOCUMENT TYPE: Patent
LANGUAGE: English
AB Human **colon specific gene** polypeptides and DNA (RNA) encoding such polypeptides and a procedure for producing such polypeptides by recombinant techniques is disclosed. Also disclosed are methods for utilizing such polynucleotides or polypeptides as a diagnostic marker for **colon cancer** and as an agent to determine if **colon cancer** has metastasized. Also disclosed are antibodies specific to the **colon specific gene** polypeptides which may be used to target cancer cells and be used as part of a **colon cancer** vaccine. Methods of screening for agonists and antagonists for the polypeptide and therapeutic uses of the antagonists are also disclosed.

L4 ANSWER 3 OF 10 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2000-328946 [28] WPIDS

DOC. NO. NON-CPI: N2000-247638
DOC. NO. CPI: C2000-099678
TITLE: Detecting, diagnosing and monitoring gastrointestinal cancers comprises measuring the levels of cancer specific gene/protein 2 (CC2) in tissues or bodily fluids.
DERWENT CLASS: B04 D16 S03
INVENTOR(S): MACINA, R A
PATENT ASSIGNEE(S): (DIAD-N) DIADEXUS LLC
COUNTRY COUNT: 22
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000020640	A1	20000413	(200028)*	EN	33
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE					
W: CA JP US					
EP 1117833	A1	20010725	(200143)	EN	
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE					

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000020640	A1	WO 1999-US22725	19990930
EP 1117833	A1	EP 1999-950047	19990930
		WO 1999-US22725	19990930

FILING DETAILS:

PATENT NO	KIND		PATENT NO
EP 1117833	A1	Based on	WO 200020640

PRIORITY APPLN. INFO: US 1998-102879P 19981002
AN 2000-328946 [28] WPIDS
AB WO 200020640 A UPAB: 20000613
NOVELTY - Diagnosing the presence of gastrointestinal cancer (GC), comprising measuring a change in levels of cancer specific gene/protein 2 (CC2) in cells, tissues or bodily fluids in a patient compared with CC2 levels in a normal human control, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) diagnosing metastases of a GC in a patient, comprising:

(a) identifying a patient having a GC that is not known to have metastasized; and

(b) the above new method. where an increase in measured CC2 levels in the patient is associated with a cancer which has metastasized;

(2) staging a GC in a patient having a GC, comprising steps (a)-(b) of method of (1), where an increase in CC2 levels in the patient is associated with a cancer which is progressing and a decrease is associated with a cancer which is regressing or in remission;

(3) monitoring a change in the stage of a GC in a patient, comprising step (a) of the method of (1) and:

(a) periodically measuring the level of CC2 in samples of cells, tissues or bodily fluids from the patient; and

(b) as for step (c) of the method of (1), wherein an increase in CC2 levels in the patient is associated with a cancer which has metastasized/is progressing and a decrease is associated with a cancer which is regressing or in remission;

(4) an antibody that specifically binds CC2;

(5) imaging a GC cancer in a patient, comprising administering the antibody of (4) (which is preferably labeled with paramagnetic ions or a radioisotope) to the patient; and

(6) a method of treating a GC in a patient, comprising administering the antibody of (5) (which is preferably conjugated to a cytotoxic agent) to the patient.

USE - The methods are used for diagnosing the presence of gastrointestinal cancers such as stomach cancer, **cancer** of the small intestine, and **colon cancer**, especially for a gastrointestinal **cancer** which has not metastasized. The methods may also be used for staging and monitoring gastrointestinal **cancer**. Antibodies which specifically bind to **colon specific gene** 2 (CC2) can also be used in vivo in patients suspected of having gastrointestinal cancers, for treatment and imaging (all claimed).

ADVANTAGE - The new methods are sensitive and specific and allow for early diagnosis of gastrointestinal cancer. This means that treatment can commence earlier. Furthermore, the methods are not invasive, unlike prior art surgical procedures.

Dwg.0/0

L4 ANSWER 4 OF 10 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD

ACCESSION NUMBER: 2000-205579 [18] WPIDS
DOC. NO. NON-CPI: N2000-152973
DOC. NO. CPI: C2000-063380
TITLE: Novel methods for diagnosing, monitoring, staging, imaging and treating **colon cancer** by measuring the level of **colon specific gene** markers.
DERWENT CLASS: B04 D16 S03
INVENTOR(S): MACINA, R A; RECIPON, H; SUN, Y
PATENT ASSIGNEE(S): (DIAD-N) DIADEXUS LLC
COUNTRY COUNT: 22
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000007632	A1	20000217	(200018)*	EN	42
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE					
W: CA JP US					
EP 1107798	A1	20010620	(200135)	EN	
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE					

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000007632	A1	WO 1999-US16357	19990720
EP 1107798	A1	EP 1999-937328	19990720
		WO 1999-US16357	19990720

FILING DETAILS:

PATENT NO	KIND	PATENT NO
EP 1107798	A1 Based on	WO 200007632

PRIORITY APPLN. INFO: US 1998-95231P 19980804
AN 2000-205579 [18] WPIDS
AB WO 200007632 A UPAB: 20000412
NOVELTY - A novel method for diagnosing the presence of **colon cancer** in a patient comprises measuring levels of **colon specific gene** markers (**CSG**) in cells, tissues or bodily fluids, and comparing the measured levels of **CSG** with levels of **CSG** from a normal human control, where an increase in measured **CSG** levels in the patient versus control is associated with the presence of **colon cancer**.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a method of diagnosing metastatic **colon cancer** in a patient, comprising:

(a) identifying a patient having **colon cancer** that is not known to have metastasized;

(b) measuring levels of **CSG** in cells, tissues or bodily fluids in the patient; and

(c) comparing the measured levels of **CSG** with levels of **CSG** from a normal human control, where an increase in measured **CSG** levels in the patient versus control is associated with a cancer which has metastasized;

(2) a method of staging **colon cancer** in a patient, comprising:

(a) identifying a patient with **colon cancer**;

(b) measuring **CSG** levels in a cell, tissue or bodily fluid sample; and

(c) comparing levels to a normal human control sample, where an increase in **CSG** levels is associated with a cancer which is progressing, and a decrease in **CSG** levels is associated with a cancer which is regressing or in remission;

(3) a method of monitoring **colon cancer** in a patient for the onset of metastasis, comprising:

(a) identifying a patient having **colon cancer** that is not known to have metastasized;

(b) periodically measuring **CSG** levels in a cell, tissue or bodily fluid sample; and

(c) comparing the levels with a sample obtained from a normal human control where an increase in any one of the periodically measured levels is associated with a cancer that has metastasized;

(4) a method of monitoring changes in a stage of **colon cancer** in patient, comprising:

(a) identifying a patient having **colon cancer**;

(b) periodically measuring **CSG** levels in a cell, tissue or bodily fluid sample; and

(c) comparing levels with a sample obtained from a normal human control, where an increase in any one of the periodically measured levels is associated with a cancer which is progressing in stage and a decrease in any one of the periodically measured levels is associated with a cancer which is regressing in stage or in remission;

(5) an antibody against a **CSG** which comprises the 1710, 1109 or 1141 base pair (bp) sequence, all fully defined in the specification;

(6) a method of imaging **colon cancer** in a patient, comprising administering to the patient the antibody of (5); and

(7) a method of treating **colon cancer** in a patient, comprising administering to the patient the antibody of (5).

ACTIVITY - Cytostatic.

MECHANISM OF ACTION - Antibodies to **colon specific genes** are administered alone or conjugated to cytotoxic agents.

USE - The method is used to detect, monitor, stage or give a prognosis for **colon cancer** (claimed). The antibodies are used for detection or image localization of the **colon specific genes** (**CSGs**). The antibodies can be conjugated to cytotoxic agent or drug and used to treat **colon cancer** (claimed).

ADVANTAGE - The methods of the invention are more accurate than prior art clinical methods for staging **colon cancer**, because they measure **colon** specific markers, and, unlike pathological staging methods, do not depend on an invasive procedure.

Dwg.0/0

L4 ANSWER 5 OF 10 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD

ACCESSION NUMBER: 2000-126383 [11] WPIDS
DOC. NO. NON-CPI: N2000-095292
DOC. NO. CPI: C2000-038417
TITLE: Diagnosing, monitoring and staging **colon cancer**.
DERWENT CLASS: B04 D16 J04 S03
INVENTOR(S): MACINA, R A; SUN, Y; YANG, F
PATENT ASSIGNEE(S): (DIAD-N) DIADEXUS LLC
COUNTRY COUNT: 22
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9960161	A1	19991125	(200011)*	EN	29
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE					
W: CA JP US					
EP 1080227	A1	20010307	(200114)	EN	
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE					

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9960161	A1	WO 1999-US10498	19990512
EP 1080227	A1	EP 1999-924210	19990512
		WO 1999-US10498	19990512

FILING DETAILS:

PATENT NO	KIND	PATENT NO

EP 1080227 A1 Based on WO 9960161

PRIORITY APPLN. INFO: US 1998-86266 19980521
AN 2000-126383 [11] WPIDS
AB WO 9960161 A UPAB: 20000301
NOVELTY - Diagnosing the presence, or metastasis, of **colon cancer** in a patient, comprising measuring **Colon Specific Gene** (**CSG**) levels in a cell, tissue or bodily fluid sample of the patient and a control, where increased **CSG** levels in the patient compared to the control is associated with the presence, or metastasis, of **colon cancer**, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) staging **colon cancer** in a patient, comprising identifying a patient with **colon cancer**, measuring **CSG** levels in a cell, tissue or bodily fluid sample and comparing levels to a control sample, where increasing **CSG** levels is associated with a cancer which is progressing, and decreased levels are associated with a cancer which is regressing or in remission;

(2) monitoring **colon cancer** in a patient for the onset of metastasis, comprising identifying a patient having **colon cancer** that is not known to have metastasized, periodically measuring **CSG** levels in a cell, tissue or bodily fluid sample, and comparing the levels with a sample obtained from a control where an increase in any one of the periodically measured levels is associated with a cancer that has metastasized; and

(3) monitoring changes in a stage of **colon cancer** in patient, comprising identifying a patient having **colon cancer**, periodically measuring **CSG** levels in a cell, tissue or bodily fluid sample, and comparing levels with a sample obtained from a control, where an increase in any one of the periodically measured levels is associated with a cancer which is in progressing stage and a decrease in any one of the periodically measured levels is associated with a cancer which is regressing in stage or in remission.

USE - The novel method is used to detect, monitor, stage and give a prognosis for **colon cancer**.

ADVANTAGE - The invention is more accurate than prior art clinical methods for staging **colon cancer**, and unlike pathological staging methods, does not depend on an invasive procedure.

Dwg.0/0

L4 ANSWER 6 OF 10 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1999-130432 [11] WPIDS
CROSS REFERENCE: 2000-464055 [38]
DOC. NO. CPI: C1999-038062
TITLE: Isolated human **colon specific gene** - used to develop products for the diagnosis and treatment of disorders of the **colon**, e.g. **colon cancer** and metastases.
DERWENT CLASS: B04 D16
INVENTOR(S): DILLON, P J; LI, Y; SOPPET, D R
PATENT ASSIGNEE(S): (HUMA-N) HUMAN GENOME SCI INC

COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 5861494	A	19990119	(199911)*		20

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 5861494	A	US 1995-468413	19950606

PRIORITY APPLN. INFO: US 1995-468413 19950606
AN 1999-130432 [11] WPIDS
CR 2000-464055 [38]
AB US 5861494 A UPAB: 20000823
(A) An isolated polynucleotide (PN) which comprises a member selected from:
(a) a PN sequence encoding a polypeptide comprising amino acids 2 to 158 of a 158 amino acid sequence (II) as given in the specification, and
(b) the full complement of (a).
Also claimed are:
(1) a recombinant vector comprising a PN as in (A), where the PN is DNA;
(2) a recombinant host cell comprising a PN as in (A), where the PN is DNA;
(3) an isolated PN comprising a member selected from:
(a) a PN sequence encoding the same mature polypeptide encoded by a human cDNA in ATCC No. 97129, and
(b) the full complement of (a);
(4) an isolated PN comprising a PN sequence that will hybridise under stringent conditions to a member selected from (a) and (b) as in (A);
(5) an isolated PN comprising a PN sequence that will hybridise under stringent conditions with a member selected from (a) and (b) as in (4);
(6) a method of making a recombinant vector comprising inserting an isolated PN as in (3), (4) or (5) into a recombinant vector, where the PN is DNA, and
(7) a recombinant host cell comprising a PN as in (3), (4) or (5), where the PN is DNA.
USE - The PNs, which represent a human **colon specific gene** can be used to develop products for the diagnosis of a disorder of the **colon**, e.g. **colon cancer** or metastases. The products can also be used to screen for agonists or antagonists for the polypeptides.
The antagonists may be used to treat **colon cancer**, since they interact with the function of colon specific polypeptides in a manner to inhibit natural function which is necessary for the viability of **colon cancer** cells. The products can also be used for the production of antibodies and for the identification of receptors for the polypeptides.
Dwg.0/1

L4 ANSWER 7 OF 10 MEDLINE DUPLICATE 1
ACCESSION NUMBER: 1999243161 MEDLINE
DOCUMENT NUMBER: 99243161 PubMed ID: 10226574
TITLE: Extract of Solanum muricatum (Pepino/**CSG**) inhibits tumor growth by inducing apoptosis.
AUTHOR: Ren W; Tang D G
CORPORATE SOURCE: Virotech Canada Inc., Windsor, ON, Canada.. wpren@mnsi.net
SOURCE: ANTICANCER RESEARCH, (1999 Jan-Feb) 19 (1A) 403-8. Journal code: 59L; 8102988. ISSN: 0250-7005.
PUB. COUNTRY: Greece
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199905
ENTRY DATE: Entered STN: 19990601
Last Updated on STN: 19990601
Entered Medline: 19990520

AB BACKGROUND: Apoptosis, or programmed cell death, is characterized by certain distinct morphological and biochemical features. Most chemotherapeutic drugs exert their anti-tumor effects by inducing apoptosis. Therefore, an effective compound inducing apoptosis appears to be a relevant strategy to suppress various human tumors. In a search for tumor inhibitors from various kinds of plants, we found that extracts from Solanum muricatum (**CSG**) can inhibit tumor growth both in vivo and in vitro by inducing apoptosis. MATERIALS AND METHODS: A lyophilized aqueous fraction extracted from Solanum muricatum (CSG4) was used in this study. The human cell lines tested include: prostate (PC3, DU145), stomach (MKN45), liver (QGY-7721, SK-HEP-1), breast (MDA-MB-435), ovarian (OVCAR), **colon** (HT29) and lung (NCI-H209) **cancer** cells; NHP (prostate), HUVEC (umbilical vein endothelial cell), and WI-38 (lung diploid fibroblasts) normal cells. The cell survival was determined by either Cell Titer MTS cell proliferation kit or trypan blue dye exclusion assay. The apoptosis was analyzed by (a) apoptotic morphology by light microscopy; (b) DNA ladder formation; (c) PARP cleavage assay. RESULTS: a) **CSG** possesses selective cytotoxic activity against all the tumor cell lines being tested. The LD50 value is 561-825 micrograms/ml. b) **CSG** showed a much lower cytotoxicity to NHP, HUVEC and WI-38 normal cell lines with LD50 value being 2.8-3.2 mg/ml, which is 3-6 fold higher than on tumor cells. c) The in vivo study demonstrated that injection of **CSG** (100 micrograms) directly into tumor mass can reduce the tumor volume dramatically in nude mice inoculated with MKN45 gastric cancer cells. d) **CSG**-mediated tumor growth inhibition is through induction of apoptotic cell death, as manifested by (a) typical apoptotic morphology; (b) DNA ladder formation; and (c) PARP cleavage assay. CONCLUSION: Taken together, the present study suggests, for the first time, that **CSG** may represent promising new chemical entity which preferentially targets various tumor cells by triggering apoptosis.

L4 ANSWER 8 OF 10 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1998-229823 [20] WPIDS
DOC. NO. CPI: C1998-071736
TITLE: Colon-specific nucleic acids - useful as probes for detecting **colon cancer** micrometastases.

DERWENT CLASS: B04 D16
INVENTOR(S): ROSEN, C; YU, G
PATENT ASSIGNEE(S): (HUMA-N) HUMAN GENOME SCI INC
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 5733748	A	19980331	(199820)*		50

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 5733748	A	US 1995-469667	19950606

PRIORITY APPLN. INFO: US 1995-469667 19950606
AN 1998-229823 [20] WPIDS
AB US 5733748 A UPAB: 19980520
A new isolated polynucleotide (I) comprises a sequence at least 95% identical to a sequences encoding polypeptides that are either: (a) a 167 amino acid (aa) sequence; (b) aa 2-135 of a 135 aa sequence; (c) a 228 aa sequence; (d) a 163 aa sequence; (e) an 81 aa sequence; (f) aa 2-323 of a 323 aa sequence; (g) a 156 aa sequence; or (h) the complements of sequences as in (a)-(g).

Also claimed are: (1) a recombinant vector comprising (I); (2) a recombinant host cell containing (1); and (3) an isolated polynucleotide comprising a sequence at least 95% identical to a sequence encoding a mature polypeptide encoded by the human cDNA in ATCC 97102 or its complement.

USE - The polynucleotides are partial or full-length cDNA clones of **colon-specific genes** and can be used as probes to detect expression of the corresponding human genes, e.g. in diagnostic assays for detecting micrometastases of **colon cancer**. The recombinant cells can be used to produce the polypeptides, in order that antibodies can be raised and used in further screening or diagnostics.

Dwg.0/13

L4 ANSWER 9 OF 10 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1997-043162 [04] WPIDS
DOC. NO. NON-CPI: N1997-035728
DOC. NO. CPI: C1997-013821
TITLE: New isolated **colon specific gene** - used to develop prods. for use in the diagnosis and treatment of **colon** disorders, partic. **colon cancer**
..
DERWENT CLASS: B04 D16 S03
INVENTOR(S): DILLON, P J; LI, Y; SOPPET, D R
PATENT ASSIGNEE(S): (HUMA-N) HUMAN GENOME SCI INC
COUNTRY COUNT: 60
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9639541	A1	19961212	(199704)*	EN	64

RW: AT BE CH DE DK ES FR GB GR IE IT KE LU MC MW NL OA PT SD SE SZ UG
W: AM AT AU BB BG BR BY CA CH CN CZ DE DK ES FI GB GE HU JP KE KG KP KR KZ LK LT LU LV MD MG MN MW MX NO NZ PL PT RO RU SD SE SI SK TJ TT UA US UZ VN

AU 9528180 A 19961224 (199715)
EP 833948 A1 19980408 (199818) EN
R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE
CN 1194009 A 19980923 (199906)
JP 11506920 W 19990622 (199935) 57
AU 711346 B 19991014 (200001)
KR 99022532 A 19990325 (200023)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9639541	A1	WO 1995-US7169	19950606
AU 9528180	A	AU 1995-28180	19950606
		WO 1995-US7169	19950606
EP 833948	A1	EP 1995-923729	19950606
		WO 1995-US7169	19950606
CN 1194009	A	CN 1995-197931	19950606
		WO 1995-US7169	19950606
JP 11506920	W	WO 1995-US7169	19950606
		JP 1997-500365	19950606
AU 711346	B	AU 1995-28180	19950606
		WO 1995-US7169	19950606
KR 99022532	A	WO 1995-US7169	19950606
		KR 1997-709013	19971206

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9528180	A	Based on	WO 9639541
EP 833948	A1	Based on	WO 9639541
JP 11506920	W	Based on	WO 9639541
AU 711346	B	Previous Publ.	AU 9528180
		Based on	WO 9639541
KR 99022532	A	Based on	WO 9639541

PRIORITY APPLN. INFO: WO 1995-US7169 19950606
AN 1997-043162 [04] WPIDS
AB WO 9639541 A UPAB: 19970122
An isolated polynucleotide (PN) comprises a member selected from: (a) a PN encoding the polypeptide comprising amino acids 1-158 of a 158 amino acid sequence given in the specification; (b) a PN which encodes a mature polypeptide encoded by the DNA contained in ATCC Deposit No. 97129; (c) a PN capable of hybridising to and which is at least 70% identical to a PN of (a) or (b); and (d) a PN fragment of a PN of (a), (b) or (c).

USE - The PNs can be used for the diagnosis of disorders of the colon in hosts. The polypeptide and its (ant)agonists can be used for the treatment of disorders of the **colon**, partic. **colon cancer**.

Dwg.0/1

L4 ANSWER 10 OF 10 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1997-043054 [04] WPIDS
DOC. NO. CPI: C1997-013713
TITLE: Human **colon specific genes** and their expression products - detection of which, in non-colon tissue samples, can be used as indication of **colon cancer** metastasis.
DERWENT CLASS: B04 D16
INVENTOR(S): ROSEN, C A; YU, G
PATENT ASSIGNEE(S): (HUMA-N) HUMAN GENOME SCI INC
COUNTRY COUNT: 60
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9639419	A1	19961212	(199704)*	EN	88
RW: AT BE CH DE DK ES FR GB GR IE IT KE LU MC MW NL OA PT SD SE SZ UG					
W: AM AT AU BB BG BR BY CA CH CN CZ DE DK ES FI GB GE HU JP KE KG KP KR KZ LK LT LU LV MD MG MN MW MX NO NZ PL PT RO RU SD SE SI SK TJ TT UA US UZ VN					
AU 9528205	A	19961224	(199715)		
EP 847398	A1	19980617	(199828)	EN	
R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE					
JP 11506342	W	19990608	(199933)		71

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9639419	A1	WO 1995-US7289	19950606
AU 9528205	A	AU 1995-28205	19950606
		WO 1995-US7289	19950606
EP 847398	A1	EP 1995-923764	19950606
		WO 1995-US7289	19950606
JP 11506342	W	WO 1995-US7289	19950606
		JP 1997-500380	19950606

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9528205	A	Based on	WO 9639419
EP 847398	A1	Based on	WO 9639419
JP 11506342	W	Based on	WO 9639419

PRIORITY APPLN. INFO: WO 1995-US7289 19950606
AN 1997-043054 [04] WPIDS
AB WO 9639419 A UPAB: 19970122
A novel isolated polynucleotide (I), is selected from; (a) a polynucleotide encoding the same polypeptide as a polynucleotide having a 1129 bp nucleic acid sequence given in the specification, or an at least 70% identical hybrid; or (b) a polynucleotide encoding the same mature polypeptides as a human gene having a coding portion, which includes DNA having at least 90% identity to the DNA one of nine nucleic acid sequences given in the specification, which represent fragments of **colon**

specific genes, or a DNA included in ATCC 97102.

USE - The novel isolated polynucleotide, comprises 1 of 13 human **colon specific genes**, designated CSG1-CSG13, which are primarily expressed in colon derived tissues. Transcription of these human genes in a non-colon tissue sample can be used as an indication of a **colon** disorder (i.e. **colon cancer** metastases); specifically the detection of an altered level of RNA transcribed from one of the human genes, DNA complementary to the RNA or an expression prod. (e.g. detected in an immunoassay using the antibody) (claimed). The polypeptide and cpd. (which may be a polypeptide expressed in vivo via the admin. of a polynucleotide encoding the cpd.) can be used for the treatment of a patient in need of **CSG** protein or **CSG** protein inhibition, respectively (claimed), e.g. a **colon cancer** patient.

Dwg.0/13

(FILE 'CAPLUS' ENTERED AT 11:00:00 ON 05 FEB 2002)

L5 28 S COLON(1W)SPECIF?(W)GENE
L6 18 SEA ABB=ON PLU=ON L5 AND (METASTAS? OR CANCER? OR CARCIN? OR TUMOUR OR TUMOR OR NEOPLAS?)
L7 5 SEA ABB=ON PLU=ON L6 NOT L2
L7 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2002:23823 CAPLUS
DOCUMENT NUMBER: 136:64116
TITLE: **Tumor**-specific gene expression using **carcinoembryonic** antigen gene regulatory sequence for tissue-specific expression of prodrug activating enzymes in therapy of hepatocellular and colorectal **cancers**
INVENTOR(S): Huber, Brian; Richards, Cynthia A.
PATENT ASSIGNEE(S): Glaxo Wellcome Inc., USA
SOURCE: U.S., 77 pp., Cont.-in-part of U.S. Ser. No. 841,961, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6337209	B1	20020108	US 1993-154712	19931119
CA 2176014	AA	19950526	CA 1994-2176014	19941118
WO 9514100	A2	19950526	WO 1994-GB2546	19941118
WO 9514100	A3	19950615		

W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, US, UZ
RW: KE, MW, SD, SZ, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

AU 9510712	A1	19950606	AU 1995-10712	19941118
AU 697912	B2	19981022		
ZA 9409197	A	19960520	ZA 1994-9197	19941118
EP 729515	A1	19960904	EP 1995-901512	19941118

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL,

PT, SE

HU 75235	A2	19970428	HU 1996-1311		19941118
JP 09504957	T2	19970520	JP 1994-514316		19941118
BR 9408101	A	19970805	BR 1994-8101		19941118
US 6300490	B1	20011009	US 1995-481968		19950607
FI 9602104	A	19960517	FI 1996-2104		19960517
PRIORITY APPLN. INFO.:			US 1990-574994	B2	19900927
			US 1991-662222	B2	19910222
			US 1992-841961	B2	19920226
			GB 1989-19607	A	19890830
			US 1993-154712	A	19931119
			WO 1994-GB2546	W	19941118

AB **Tumor**-specific expression constructs using transcriptional regulatory sequences from the human **carcinoembryonic** antigen gene are described. The constructs may direct expression of a foreign gene, for example the Varicella Zoster Virus Thymidine Kinase (VZV TK) or non-mammalian Cytosine Deaminase(CD) gene. In a specific embodiment, a chimeric construct contg. **carcinoembryonic** antigen (CEA) TRS linked to cytosine deaminase gene of E. coli, followed by a polyadenylation signal sequence downstream of the cytosine deaminase gene is described. More specifically, the CEA TRS sequence comprises a CEA promoter and enhancer element (from -14.4 kb to about -10.6 Kb). The construct is packaged into a synthetic retroviral particle that is capable of infecting mammalian tissue. This, in turn, may be administered to a host, and the TRS will be selectively transcriptionally activated in the target tissue (for example **cancerous** cells). Administration of compds. that are selectively metabolized by the enzyme produce cytotoxic or cytostatic metabolites in situ thereby selectively killing or arresting the growth of the target cells. A specific embodiment demonstrates the synthesis of cytosine deaminase using the said mol. construct, which catalyzes the conversion of 5-fluorocytosine to 5-fluorouracil in mammalian cells. This virus directed enzyme prodrug therapy approach has applications in colorectal and hepatocellular **cancers**.

REFERENCE COUNT: 90 THERE ARE 90 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER:	1999:723214 CAPLUS
DOCUMENT NUMBER:	131:347531
TITLE:	A highly conserved polynucleotide sequence linked to a genetic predisposition to schizophrenia, a method of diagnosis, and therapeutic applications
INVENTOR(S):	Leroy, Pascale; Bourgeron, Thomas; McElreavey, Ken; Fellous, Marc; Jamain, Stephane
PATENT ASSIGNEE(S):	Institut Pasteur, Fr.; Institut National de la Sante et de la Recherche Medicale (INSERM)
SOURCE:	PCT Int. Appl., 76 pp. CODEN: PIXXD2
DOCUMENT TYPE:	Patent
LANGUAGE:	English
FAMILY ACC. NUM. COUNT:	2
PATENT INFORMATION:	

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 9957316	A1	19991111	WO 1999-IB846	19990430
W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
AU 9935302	A1	19991123	AU 1999-35302	19990430

PRIORITY APPLN. INFO.:

US 1998-83625	P	19980430
US 1998-114592	P	19981231
WO 1999-IB846	W	19990430

AB The present invention relates to a novel highly conserved polynucleotide sequence (AHCP-autosomal highly conserved protein) linked to a genetic predisposition to schizophrenia. It includes a polypeptide corresponding to the polynucleotide, a transgenic animal carrying the polynucleotide, a method of detecting the presence of a polynucleotide sequence linked to a genetic predisposition to schizophrenia and a kit therefor. It also includes a method of screening for mols. capable of stimulating or inhibiting the in vivo activity of the polynucleotide and polypeptide, as well as a pharmaceutical compn. comprising at least one active mol. as obtained according to the method of screening. The p12F probe is used to identify the true transcribed gene located on short arm of chromosome 6 at 6p23 between markers D6S274 and D6S285. This provides a diagnostic tool for detecting and treating schizophrenia. The SSCP and denaturing gradient gel electrophoresis and FAMA technique may all be used to detect mutations within this gene. Therapeutic expression of the AHCP protein in human muscle and brain and bone marrow is described. This approach makes it possible to target pharmacol. studies on genes directly involved in this phenotype rather than rely on treatments currently available. Evolutionary conservation of this gene is discussed. In addn. polymorphisms within this gene are listed as well as pseudogene identification. Tissue-specific gene expression of AHCP in spleen and thymus gland and prostate and testis and ovary and small intestine and colon and blood leukocytes and brain and **cancer** cells was obsd.

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1999:524123 CAPLUS

DOCUMENT NUMBER: 131:266689

TITLE: **Tumor**-specific gene transfer via an adenoviral vector targeted to the pan-**carcinoma** antigen EpCAM

AUTHOR(S): Haisma, HJ; Pinedo, HM; Van Rijswijk, A.; Van der Meulen-Muileman, I.; Sosnowski, BA; Ying, W.; Van Beusechem, VW; Tillman, BW; Gerritsen, WR; Curiel, DT

CORPORATE SOURCE: Gene Therapy Program, Department of Medical Oncology, University Hospital Vrije Universiteit, Amsterdam, Neth.

SOURCE: Gene Ther. (1999), 6(8), 1469-1474
CODEN: GETHEC; ISSN: 0969-7128
PUBLISHER: Stockton Press
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The utility of adenoviral vectors for **cancer** therapy is limited due to their lack of specificity for **tumor** cells. In order to target adenovirus to **tumor**, the natural tropism of the adenovirus should be ablated and replaced by a **tumor**-specific binding domain. To this end, a neutralizing anti-fiber antibody conjugated to an anti-EpCAM antibody was created that targets the adenovirus to the EpCAM antigen present on **tumor** cells. The EpCAM antigen was chosen as the target because this antigen is highly expressed on a variety of adenocarcinomas of different origin such as breast, ovary, colon and lung, whereas EpCAM expression is limited in normal tissues. In these studies, the EpCAM-targeted adenovirus was shown to infect specifically **cancer** cell lines of different origin expressing EpCAM such as ovary, colon and head and neck. Gene transfer was blocked by excess anti-EpCAM antibody and dramatically reduced in EpCAM neg. cell lines, thus showing the specificity of the EpCAM-targeted adenovirus. Importantly, infection with targeted adenovirus was independent of CAR, which is the natural receptor for adenovirus binding, since blocking of CAR with recombinant fiber knob did not affect infection with targeted adenovirus. Apart from the **cancer** cell lines, the efficacy of targeted viral infection was studied in freshly isolated primary human colon **cancer** cells. As colon **cancer** predominantly **metastasizes** to liver, and adenovirus has a high tropism for hepatocytes, we also sought to det. if the EpCAM-targeted adenovirus showed reduced infectivity of human liver cells. The bispecific antibody could successfully mediate gene transfer to primary human colon **cancer** cells, whereas it almost completely abolished infection of liver cells. This work thus demonstrates that EpCAM-targeted adenoviral vectors can be specifically directed to a wide variety of adenocarcinomas. This approach may prove to be useful for selective gene therapy of **cancer**.

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1998:795131 CAPLUS
DOCUMENT NUMBER: 130:48322
TITLE: sequence and clinical diagnosis and therapeutic applications for new human dpl homolog
INVENTOR(S): Bandman, Olga; Guegler, Karl J.; Shah, Purvi; Petithory, Joanne R.; Corley, Neil C.
PATENT ASSIGNEE(S): Incyte Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 62 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 9854321 A1 19981203 WO 1998-US10799 19980527
W: AT, AU, BR, CA, CH, CN, DE, DK, ES, FI, GB, IL, JP, KR, MX, NO, NZ, RU, SE, SG, US, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG
US 5958725 A 19990928 US 1997-865336 19970529
AU 9876020 A1 19981230 AU 1998-76020 19980527
EP 983358 A1 20000308 EP 1998-923818 19980527
R: BE, DE, ES, FR, GB, IT, NL
JP 2002503103 T2 20020129 JP 1999-500869 19980527
PRIORITY APPLN. INFO.: US 1997-865336 A2 19970529
WO 1998-US10799 W 19980527

AB The invention provides a human DP1 homolog (DP1h) and polynucleotides which identify and encode DP1h. The invention also provides expression vectors, host cells, agonists, antibodies and antagonists. The invention also provides methods for treating disorders assocd. with expression of DP1h.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:105216 CAPLUS
DOCUMENT NUMBER: 126:116609
TITLE: A gene expressed in colon **cancers** and its gene product and their diagnostic and therapeutic uses
INVENTOR(S): Soppet, Daniel R.; Li, Yi; Dillon, Patrick J.
PATENT ASSIGNEE(S): Human Genome Sciences, Inc., USA; Soppet, Daniel R.; Li, Yi; Dillon, Patrick J.
SOURCE: PCT Int. Appl., 64 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9639541	A1	19961212	WO 1995-US7169	19950606
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, US, UZ, VN				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9528180	A1	19961224	AU 1995-28180	19950606
AU 711346	B2	19991014		
EP 833948	A1	19980408	EP 1995-923729	19950606
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE				

PRIORITY APPLN. INFO.: WO 1995-US7169 19950606

AB A gene that is expressed in **cancerous** colon tissue and that may be used as a diagnostic marker or as a target for treatment of the disease (no data) is described. The gene can also be used as a marker for **metastasis** of the **tumor**.

Antibodies specific to the gene product that may be used to target **cancer** cells and as part of a colon **cancer** vaccine are also described. Methods of screening for agonists and antagonists for the polypeptide and therapeutic uses of the antagonists are also disclosed. Expression of the cloned gene in a baculovirus system is described.

(FILE 'MEDLINE, BIOSIS, EMBASE, WPIDS, CONFSCI, SCISEARCH, JICST-EPLUS, JAPIO, CANCERLIT' ENTERED AT 11:02:49 ON 05 FEB 2002)

L8 17 S L6
L9 8 S L8 NOT L3
L10 4 DUP REM L9 (4 DUPLICATES REMOVED)

L10 ANSWER 1 OF 4 MEDLINE DUPLICATE 1
ACCESSION NUMBER: 1998200182 MEDLINE
DOCUMENT NUMBER: 98200182 PubMed ID: 9541112
TITLE: Molecular basis of variegate porphyria: a missense mutation in the protoporphyrinogen oxidase gene.
AUTHOR: Frank J; Lam H; Zaider E; Poh-Fitzpatrick M; Christiano A M
CORPORATE SOURCE: Department of Dermatology, Columbia University, College of Physicians and Surgeons, New York, NY 10032, USA.
SOURCE: JOURNAL OF MEDICAL GENETICS, (1998 Mar) 35 (3) 244-7. Journal code: J1F; 2985087R. ISSN: 0022-2593.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199806
ENTRY DATE: Entered STN: 19980611
Last Updated on STN: 19980611
Entered Medline: 19980601

AB Variegate porphyria (VP) is an autosomal dominant disorder characterised by a partial defect in the activity of protoporphyrinogen oxidase (PPO), and has recently been genetically linked to the PPO gene on chromosome 1q22-23 (Z=6.62). In this study, we identified a mutation in the PPO gene in a patient with VP and two unaffected family members. The mutation consisted of a previously unreported T to C transition in exon 13 of the PPO gene, resulting in the substitution of a polar serine by a non-polar proline (S450P). This serine residue is evolutionarily highly conserved in man, mouse, and Bacillus subtilis, attesting to the importance of this residue. Interestingly, the gene for Gardner's syndrome (FAP) also segregates in this family, independently of the VP mutation. Gardner's syndrome or familial adenomatous polyposis (FAP) is also an autosomal dominantly inherited genodermatosis, and typically presents with colorectal **cancer** in early adult life secondary to extensive adenomatous polyps of the **colon** . The **specific gene** on chromosome 5 that is the site of the mutation in this disorder is known as APC (adenomatous polyposis coli), and the gene has been genetically linked to the region of 5q22.

L10 ANSWER 2 OF 4 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1998:165763 BIOSIS
DOCUMENT NUMBER: PREV199800165763
TITLE: Colon carbonic anhydrase 1: Transactivation of gene

expression by the homeodomain protein Cdx2.
AUTHOR(S): Drummond, F.-J.; Sowden, J.; Morrison, K.; Edwards, Y. H. (1)
CORPORATE SOURCE: (1) MRC Human Biochemical Genet. Unit, Univ. Coll. London, Wolfson House, 4 Stephenson Way, London NW1 2HE UK
SOURCE: FEBS Letters, (Feb. 20, 1998) Vol. 423, No. 2, pp. 218-222.
ISSN: 0014-5793.
DOCUMENT TYPE: Article
LANGUAGE: English
AB The homeodomain protein, Cdx2, has been implicated in the transcriptional regulation of genes expressed in the small intestine. In vitro studies of the carbonic anhydrase 1 (CA1) colon promoter implied that Cdx2 may also play a role in the regulation of **colon-specific gene** expression. The current work follows up this proposal by examining the ability of Cdx2 to transactivate gene expression in cultured cells mediated by CA1 promoter sequences. The results show that Cdx2 exerts a positive regulatory effect by binding to a motif 87 bp upstream of the CA1 TATA box; this motif appears to act as an enhancer since gene activation is independent of its orientation.

L10 ANSWER 3 OF 4 CANCERLIT
ACCESSION NUMBER: 97604983 CANCERLIT
DOCUMENT NUMBER: 97604983
TITLE: Targeting gene therapy for colon **cancer** (Meeting abstract).
AUTHOR: Kurane S; Krauss J C; Bielinska A U; Kukowska-Latallo J F; Cameron M J; Baker J R; Chang A E
CORPORATE SOURCE: Univ. of Michigan, Ann Arbor, MI 48109.
SOURCE: Proc Annu Meet Am Assoc Cancer Res, (1996). Vol. 37, pp. A2336.
ISSN: 0197-016X.
DOCUMENT TYPE: (MEETING ABSTRACTS)
FILE SEGMENT: ICDB
LANGUAGE: English
ENTRY MONTH: 199703
AB Mammalian expression vectors were designed to provide for **colon cancer specific gene** expression. A minimal CEA promoter (BP-424 to -8, provided by Dr J Thompson, Germany) was cloned upstream of the beta-galactosidase (GAL) gene or a herpes simplex virus thymidine kinase (TK) gene. A strong basal promoter of GAL (pSV-b-GAL, Promega) was used as a positive control. GAL activity in 4 CEA producing colon **cancer** cell lines (SW403, SW1463, Lovo and Colo205) was about 400% of those in CEA non-producing Hela and two melanoma cell lines. However, the maximal level in the colon **cancer** cell lines was only 30% of that achieved by, pV-b-GAL. In order to increase promoter activity, an enhancer from the immediate early gene of CMV was inserted 5' of the CEA promoter. This CMV-CEA/GAL plasmid demonstrated 180% of the GAL activity in the CEA producing cell lines compared to the pSV-b-GAL, and maintained specificity with only 20% of the GAL activity in the CEA non-producing cell lines. Colon **cancer** cell lines transfected with the CMV-CEA/TK construct demonstrated a marked increase in sensitivity to ganciclovir as compared to non-transfected cells. Colon **cancer** specific expression is achievable and may prove

useful in the gene therapy of this disorder.

L10 ANSWER 4 OF 4 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1996:256438 BIOSIS
DOCUMENT NUMBER: PREV199698812567
TITLE: Targeting gene therapy for colon **cancer**.
AUTHOR(S): Kurane, S. (1); Krauss, J. C.; Bielinska, A. U.; Kukowska-Latallo, J. F.; Cameron, M. J.; Baker, J. R.; Chang, A. E.
CORPORATE SOURCE: (1) Univ. Mich., Ann Arbor, MI 48109 USA
SOURCE: Proceedings of the American Association for Cancer Research Annual Meeting, (1996) Vol. 37, No. 0, pp. 342.
Meeting Info.: 87th Annual Meeting of the American Association for Cancer Research Washington, D.C., USA April 20-24, 1996
ISSN: 0197-016X.
DOCUMENT TYPE: Conference
LANGUAGE: English

(FILE 'CAPLUS, MEDLINE, BIOSIS, EMBASE, WPIDS, CONFSCI, SCISEARCH, JICST-EPLUS, JAPIO, CANCERLIT' ENTERED AT 11:05:58 ON 05 FEB 2002)
L11 146 S MACINA R?/AU
L12 17224 S SUN Y?/AU
L13 15 S L11 AND L12
L14 8 S (L11 OR L12) AND L5
L15 18 S L13 OR L14
L16 12 DUP REM L15 (6 DUPLICATES REMOVED)

- Author (s)

L16 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2002:72317 CAPLUS
TITLE: Method of diagnosing, monitoring, staging, imaging and treating colon cancer
INVENTOR(S): **Macina, Roberto A.; Sun, Yongming**
PATENT ASSIGNEE(S): Diadexus, Inc., USA
SOURCE: PCT Int. Appl., 52 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002006515	A2	20020124	WO 2001-US22454	20010717

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2000-618596 A 20000717

AB The present invention provides new methods for detecting, diagnosing, monitoring, staging, prognosticating, imaging and treating colon cancer.

L16 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2002:10740 CAPLUS
DOCUMENT NUMBER: 136:84128
TITLE: Use of **colon specific gene** and gene products in diagnosing, monitoring, staging, imaging and treating colon cancer
INVENTOR(S): **Macina, Roberto A.**; Pillai, Rajeswari
PATENT ASSIGNEE(S): Diadexus, Inc., USA
SOURCE: PCT Int. Appl., 135 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002000939	A2	20020103	WO 2001-US20724	20010628

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2000-214515 P 20000628

AB The invention relates to **colon specific gene** (CSG) polypeptides, polynucleotides encoding the polypeptides, methods for producing the polypeptides, in particular by expressing the polynucleotides, and agonists and antagonists of the polypeptides. The present invention includes methods of diagnosing metastases or staging of colon cancer in a patient by comparing CSG expression levels in cells, tissues and body fluids of colon cancer patients and normal human control. Increased expression of CSG indicates progressive cancer while decreased CSG expression is correlated with cancer that is regressing or in remission. The invention further relates to methods for utilizing such polynucleotides, polypeptides, agonists and antagonists for applications, which relate, in part, to research, diagnostic and clin. arts. Antibodies to CSG polypeptides can be labeled for detection in tissues which would be useful in detecting colon cancer via imaging and therapy. Vaccines contg. CSG proteins are another embodiment of the invention.

L16 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 1
ACCESSION NUMBER: 2001:618214 CAPLUS
DOCUMENT NUMBER: 135:191338
TITLE: Lung cancer specific genes and proteins and methods for diagnosing, monitoring, staging,

imaging and treating lung cancers
INVENTOR(S): Chen, Sei-Yu; **Sun, Yongming;** **Macina, Roberto A.**
PATENT ASSIGNEE(S): Diadexus, Inc., USA
SOURCE: PCT Int. Appl., 118 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001061055	A2	20010823	WO 2001-US5674	20010220

W: AU, CA, JP
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR
PRIORITY APPLN. INFO.: US 2000-183188 P 20000217
AB The invention relates to lung-specific genes and Lng103 and Lng104 proteins encoded by these genes, methods for producing the proteins with recombinant cells, and agonists and antagonists of the proteins. The invention further relates to methods for utilizing such nucleic acids, proteins, and agonists/antagonists for lung cancer diagnosis and staging, for imaging lung cancer, and for screening for lung cancer inhibitors as well as for treating lung cancers.

L16 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 2
ACCESSION NUMBER: 2001:338379 CAPLUS
DOCUMENT NUMBER: 134:350272
TITLE: Lng108 determination in diagnosing, monitoring, staging, imaging and treating cancer
INVENTOR(S): Recipon, Herve; **Macina, Roberto A.**; Chen, Sei-Yu; **Sun, Yongming**
PATENT ASSIGNEE(S): Diadexus, Inc., USA
SOURCE: PCT Int. Appl., 36 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001032209	A1	20010510	WO 2000-US30482	20001103

W: CA, JP
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR
PRIORITY APPLN. INFO.: US 1999-163444 P 19991104
AB The present invention provides new methods for detecting, diagnosing, monitoring, staging, prognosticating, imaging and treating cancer. Diagnosis involves detg. levels of Lng108 in cells, tissues, or body fluids in a patient and comparing the detd. levels of Lng108 with levels of Lng108 in cells, tissues, or body fluids from a normal human control, wherein a change in detd. levels of Lng108 in said patient vs. normal human control is assocd. with the presence of cancer.
REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR

THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:886514 CAPLUS
DOCUMENT NUMBER: 136:34276
TITLE: Method of diagnosing, monitoring, staging, imaging and treating colon cancer
INVENTOR(S): **Macina, Roberto A.**; Chen, Sei-yu; Pluta, Jason; **Sun, Yongming**; Recipon, Herve
PATENT ASSIGNEE(S): Diadexus, Inc., USA
SOURCE: PCT Int. Appl., 116 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001092528	A2	20011206	WO 2001-US17583	20010529

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2000-207383 P 20000526

AB The invention relates to CSG (**colon-specific genes**) polypeptides, polynucleotides encoding the polypeptides, methods for producing the polypeptides, in particular by expressing the polynucleotides, and agonists and antagonists of the polypeptides. The invention further relates to methods for utilizing such polynucleotides, polypeptides, agonists and antagonists for applications, which relate, in part, to research, diagnostic and clin. arts.

L16 ANSWER 6 OF 12 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2001-616504 [71] WPIDS
DOC. NO. NON-CPI: N2001-459822
DOC. NO. CPI: C2001-184647
TITLE: New colon cancer specific polypeptides and polynucleotides, useful for detecting, diagnosing, monitoring, staging, imaging and treating cancers, particularly colon cancer.
DERWENT CLASS: B04 D16 S03
INVENTOR(S): HU, P; **MACINA, R A**; PIDERIT, A; RECIPON, H; YANG, F
PATENT ASSIGNEE(S): (DIAD-N) DIADEXUS INC
COUNTRY COUNT: 23
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001073030	A2	20011004	(200171)*	EN	105
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR					
W: AU CA JP US					
AU 2001051013	A	20011008	(200208)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001073030	A2	WO 2001-US9737	20010326
AU 2001051013	A	AU 2001-51013	20010326

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2001051013	A	Based on	WO 200173030

PRIORITY APPLN. INFO: US 2000-192667P 20000328
AN 2001-616504 [71] WPIDS
AB WO 200173030 A UPAB: 20011203
NOVELTY - An isolated **colon** cancer **specific gene** (CSG) polynucleotide (I) comprising:
(a) one of 57 sequences (S1) of defined base pairs (bp) as given in specification;
(b) its fragment of 15 contiguous nucleobases;
(c) a nucleic acid sequence which, due to degeneracy in genetic coding, has variations in (S1); or
(d) a nucleic acid sequence which hybridizes under stringent conditions to an antisense sequence of (S1), is new.
DETAILED DESCRIPTION - An isolated **colon** cancer **specific gene** (CSG) polynucleotide (I) comprising:
(a) one of 57 sequences (S1) of defined base pairs (bp) as given in specification such as 523, 528, 478, 495, 455, 489, 545, 220, 484, 350, 322, 306, 143, 508, 582, 582, 521, 244 and 600 bp;
(b) its fragment of 15 contiguous nucleobases;
(c) a nucleic acid sequence which, due to degeneracy in genetic coding, has variations in (S1); or
(d) a nucleic acid sequence which hybridizes under stringent conditions to an antisense sequence of (S1), is new.
INDEPENDENT CLAIMS are also included for the following:
(1) an antisense oligonucleotide (II) which hybridizes to (I);
(2) a vector (III) comprising (I);
(3) a host cell (IV) comprising (III);
(4) a CSG polypeptide (V) encoded by (I);
(5) producing (V);
(6) producing a cell expressing (V) by transforming or transfecting a cell with (III) so that the cell under appropriate culture conditions, expresses (V);
(7) an antibody (VI) which is immunospecific for (V);
(8) a **colon** cancer **specific gene** (CSG) for diagnosing colon cancer, comprising (I) or (V);
(9) a CSG polypeptide agonist or antagonist identified using (V); and
(10) a vaccine (VII) comprising (V) or a vector expressing (V) which induces an immune response against (V) in a mammal.

ACTIVITY - Cytostatic.

MECHANISM OF ACTION - Vaccine; gene therapy. No supporting data is given.

USE - CSG is useful for diagnosing, staging, monitoring colon cancer for onset of metastasis or a change in stage of colon cancer, diagnosing metastases of colon cancer in a patient, by determining levels of CSG in a sample of cells, tissues, or body fluids and comparing it with levels of CSG in normal human control, where an increase in determined CSG level is associated with cancer. CSG is also useful for identifying potential therapeutic agents for use in imaging and treating colon cancer, by screening molecules for ability to bind to CSG. (V) is useful for identifying compounds which antagonize or agonize the CSG polypeptide, by contacting cells or cell membrane which express (V) with a candidate compound and monitoring the cells for changes in CSG polypeptide activities or binding as compared to cells or cell membranes not contacted with the candidate compound. (VI) labeled with paramagnetic ions or a radioisotope is useful for imaging colon cancer and (VI) conjugated to a cytotoxic agent is useful for treating colon cancer. (VII) is useful for inducing an immune response against CSG polypeptide and treating colon cancer (all claimed). (I), (V) and (VI) are useful for detecting the effect of added compounds on the production of CSG mRNA and polypeptides in cells. (V) is also useful to identify membrane bound or soluble receptors. (VI) is useful to isolate or identify clones expressing CSG polypeptide and to purify the polypeptides by affinity chromatography.

Dwg.0/0

L16 ANSWER 7 OF 12 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2001:495953 BIOSIS
DOCUMENT NUMBER: PREV200100495953
TITLE: Genomics-based strategies for the discovery and validation of colon cancer diagnostic and therapeutic targets.
AUTHOR(S): **Macina, Roberto Anibal (1)**; Pluta, Jason (1); Drumright, Carrie (1); Liang, Brandon (1); Hoang, Vu Viet (1); Recipon, Herve (1); **Sun, Yongming (1)**; Hu, Ping (1); Nguyen, Anton (1)
CORPORATE SOURCE: (1) diaDexus, Santa Clara, CA USA
SOURCE: Proceedings of the American Association for Cancer Research Annual Meeting, (March, 2001) Vol. 42, pp. 614. print.
Meeting Info.: 92nd Annual Meeting of the American Association for Cancer Research New Orleans, LA, USA March 24-28, 2001
ISSN: 0197-016X.
DOCUMENT TYPE: Conference
LANGUAGE: English
SUMMARY LANGUAGE: English

L16 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 3
ACCESSION NUMBER: 2000:117200 CAPLUS
DOCUMENT NUMBER: 132:176631
TITLE: Human cDNA sequences of nine lung-specific genes, and novel methods of diagnosing, monitoring, staging, imaging and treating lung cancer
INVENTOR(S): Yang, Fei; **Sun, Yongming**; Recipon,

Herve; **Macina, Roberto A.**
PATENT ASSIGNEE(S): Diadexus Llc, USA
SOURCE: PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000008206	A1	20000217	WO 1999-US16247	19990719
W: CA, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1104486	A1	20010606	EP 1999-935685	19990719
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

PRIORITY APPLN. INFO.: US 1998-95233 P 19980804
WO 1999-US16247 W 19990719

AB The invention provides: (a) cDNA sequences of five lung-specific genes (LSGs), and (b) new methods for detecting, diagnosing, monitoring, staging, monitoring, imaging, and treating lung cancer using the disclosed LSGs.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 4
ACCESSION NUMBER: 2000:116933 CAPLUS
DOCUMENT NUMBER: 132:177721
TITLE: A novel method of diagnosing, monitoring, staging, imaging and treating colon cancer by determining **colon-specific genes** in body fluids and tissues
INVENTOR(S): **Sun, Yongming**; Recipon, Herve; **Macina, Roberto A.**
PATENT ASSIGNEE(S): Diadexus Llc, USA
SOURCE: PCT Int. Appl., 42 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000007632	A1	20000217	WO 1999-US16357	19990720
W: CA, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1107798	A1	20010620	EP 1999-937328	19990720
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

PRIORITY APPLN. INFO.: US 1998-95231 P 19980804
WO 1999-US16357 W 19990720

AB The present invention provides new methods for detecting, diagnosing, monitoring, staging, prognosticating, imaging and

treating colon cancer that involves detg. levels of **colon-specific gene** activity in body fluids and tissues.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 10 OF 12 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2000-328946 [28] WPIDS
DOC. NO. NON-CPI: N2000-247638
DOC. NO. CPI: C2000-099678
TITLE: Detecting, diagnosing and monitoring gastrointestinal cancers comprises measuring the levels of cancer specific gene/protein 2 (CC2) in tissues or bodily fluids.
DERWENT CLASS: B04 D16 S03
INVENTOR(S): **MACINA, R A**
PATENT ASSIGNEE(S): (DIAD-N) DIADEXUS LLC
COUNTRY COUNT: 22
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000020640	A1	20000413	(200028)*	EN	33
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE					
W: CA JP US					
EP 1117833	A1	20010725	(200143)	EN	
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE					

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000020640	A1	WO 1999-US22725	19990930
EP 1117833	A1	EP 1999-950047	19990930
		WO 1999-US22725	19990930

FILING DETAILS:

PATENT NO	KIND		PATENT NO
EP 1117833	A1	Based on	WO 200020640

PRIORITY APPLN. INFO: US 1998-102879P 19981002
AN 2000-328946 [28] WPIDS
AB WO 200020640 A UPAB: 20000613
NOVELTY - Diagnosing the presence of gastrointestinal cancer (GC), comprising measuring a change in levels of cancer specific gene/protein 2 (CC2) in cells, tissues or bodily fluids in a patient compared with CC2 levels in a normal human control, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) diagnosing metastases of a GC in a patient, comprising:

(a) identifying a patient having a GC that is not known to have metastasized; and

(b) the above new method. where an increase in measured CC2 levels in the patient is associated with a cancer which has metastasized;

(2) staging a GC in a patient having a GC, comprising steps

(a)-(b) of method of (1), where an increase in CC2 levels in the patient is associated with a cancer which is progressing and a decrease is associated with a cancer which is regressing or in remission;

(3) monitoring a change in the stage of a GC in a patient, comprising step (a) of the method of (1) and:

(a) periodically measuring the level of CC2 in samples of cells, tissues or bodily fluids from the patient; and

(b) as for step (c) of the method of (1), wherein an increase in CC2 levels in the patient is associated with a cancer which has metastasized/is progressing and a decrease is associated with a cancer which is regressing or in remission;

(4) an antibody that specifically binds CC2;

(5) imaging a GC cancer in a patient, comprising administering the antibody of (4) (which is preferably labeled with paramagnetic ions or a radioisotope) to the patient; and

(6) a method of treating a GC in a patient, comprising administering the antibody of (5) (which is preferably conjugated to a cytotoxic agent) to the patient.

USE - The methods are used for diagnosing the presence of gastrointestinal cancers such as stomach cancer, cancer of the small intestine, and colon cancer, especially for a gastrointestinal cancer which has not metastasized. The methods may also be used for staging and monitoring gastrointestinal cancer. Antibodies which specifically bind to **colon specific gene** 2 (CC2) can also be used in vivo in patients suspected of having gastrointestinal cancers, for treatment and imaging (all claimed).

ADVANTAGE - The new methods are sensitive and specific and allow for early diagnosis of gastrointestinal cancer. This means that treatment can commence earlier. Furthermore, the methods are not invasive, unlike prior art surgical procedures.

Dwg.0/0

L16 ANSWER 11 OF 12 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 5

ACCESSION NUMBER: 1999:753379 CAPLUS
DOCUMENT NUMBER: 132:1796
TITLE: A novel method of diagnosing, monitoring, and staging colon cancer based on **colon-specific gene** expression
INVENTOR(S): **Macina, Roberto A.**; Yang, Fei; **Sun, Yongming**
PATENT ASSIGNEE(S): Diadexus Llc, USA
SOURCE: PCT Int. Appl., 47 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9960161	A1	19991125	WO 1999-US10498	19990512
W: CA, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1080227	A1	20010307	EP 1999-924210	19990512
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

PRIORITY APPLN. INFO.: US 1998-86266 P 19980521
WO 1999-US10498 W 19990512

AB The present invention provides a new method for detecting, diagnosing, monitoring, staging, and prognosticating colon cancer vis nine **colon-specific genes** (CSGs). Electronic subtractions, transcript imaging and protein functions searches were used to identify clones whose component EST's were exclusively or more frequently found in libraries from specific tumors. Six clones were identified whose expression predominantly occurs in the colon, and 1 of these clones was useful as a diagnostic marker for lung cancer.

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 12 OF 12 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 6
ACCESSION NUMBER: 1999:753378 CAPLUS
DOCUMENT NUMBER: 132:1795
TITLE: A novel method of diagnosing, monitoring, and staging lung cancer based on lung-specific gene expression
INVENTOR(S): Yang, Fei; **Macina, Roberto A.**; **Sun, Yongming**
PATENT ASSIGNEE(S): Diadexus Llc, USA
SOURCE: PCT Int. Appl., 40 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9960160	A1	19991125	WO 1999-US10344	19990512
W: CA, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1082459	A1	20010314	EP 1999-921894	19990512
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

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AB The present invention provides a new method for detecting, diagnosing, monitoring, staging, and prognosticating lung cancer vis six lung-specific genes (LSGs). Electronic subtractions, transcript imaging and protein functions searches were used to identify clones whose component EST's were exclusively or more frequently found in libraries from specific tumors. Six clones were identified whose expression predominantly occurs in the lung, and 3 of these clones are useful as diagnostic markers for lung cancer.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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